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(21) International Application Number: PCT/US96/15712 (22) International Filing Date: 30 September 1996 (30.09.96) (30) Priority Data: 08/536,891 29 September 1995 (29.09.95) US 60/024,169 19 August 1996 (19.08.96) US (60) Parent Applications or Grants (63) Related by Continuation US 60/024,169 (CON) Filed on 19 August 1996 (19.08.96) US 08/536,891 (CIP) Filed on 29 September 1995 (29.09.95) (71) Applicant (for all designated States except US): INDIANA UNIVERSITY FOUNDATION [US/US]; Showalter House, P.O. Box 500, Bloomington, IN 47402 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): WILLIAMS, David, A. [US/US]; 8751 N. Moore Road, Indianapolis, IN 46278 (US).		(74) Agents: GANDY, Kenneth, A. et al.; Woodard, Emhardt, Naughton, Moriarty & McNett, Bank One Center/Tower, Suite 3700, 111 Monument Circle, Indianapolis, IN 46204 (US). (81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, TT, UA, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: METHODS FOR ENHANCED VIRUS-MEDIATED DNA TRANSFER USING MOLECULES WITH VIRUS- AND CELL-BINDING DOMAINS		
(57) Abstract <p>A method to increase the efficiency of transduction of hematopoietic and other cells by retroviruses includes infecting the cells in the presence of fibronectin or fibronectin fragments. The fibronectin and fibronectin fragments significantly enhance retroviral-mediated gene transfer into the cells, particularly hematopoietic cells including committed progenitors and primitive hematopoietic stem cells. The invention also provides improved methods for somatic gene therapy capitalizing on enhanced gene transfer, hematopoietic cellular populations, and novel constructs for enhancing retroviral-mediated DNA transfer into cells and their use.</p>		